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| **Biosafety Level 2/2P/2+ Lab Self-Assessment Tool** |

This self-assessment tool can be used for BSL-2, BSL-2P, and BSL-2+ laboratories to ensure alignment with the UNT Biosafety Plan, NIH. Guidelines and BMBL (<https://www.cdc.gov/labs/BMBL.html>). Contact ibcprogram@unt.edu with questions about the BSL-2/2P/2+ review process. Note, this does not include Chemical hygiene and OSHA assessments.

|  |  |  |  |
| --- | --- | --- | --- |
| **Date:**  |  | **Reviewed By:** |  |
| **PI:**    |  | **Lab Contact, if different from PI:** |  |
| **Room(s):** |  | **Biohazardous Agent(s):** |  |
| **Phone:**  |  | **Lab Phone:** |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Yes** | **No** | **NA** | **Comments** |
| **ACCESS CONTROL** |
| 1. **Public access control is in place (e.g., doors are locked when personnel are not present, freezers are locked if in publicly accessible areas).**
 |[ ] [ ]   |       |
| **ADMINISTRATIVE MEASURES** |
| 1. **Emergency contact, reporting and assistance information is available and current.**
 |[ ] [ ]   |       |
| 1. **BSL-2 work and any r/sDNA has an approved IBC BSP**

[ ] Annual review has been completed for current year. |[ ] [ ]   | IBC#(s) and Expiration Date(s):      |
| 1. **A lab-specific Biosafety Manual is available and accessible. The Biosafety Manual includes**

[ ]  IBC-approved BSPs [ ]  Records of lab-specific training and Biosafety Manual review for all personnel within the past year[ ]  Hazard communication (e.g., [PSDS](https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment.html), [agent summary](https://www.cdc.gov/biosafety/publications/bmbl5/BMBL5_sect_VIII.pdf))[ ]  Lab-specific exposure control plan(s), if applicable[ ]  Post-exposure plan(s)[ ]  Vaccination offer documentation for all lab users (e.g., HBV), if appropriate[ ]  Safety SOPs[ ]  Reference sheets for biosafety guidelines/policies (e.g., [NIH Guidelines](file:///P%3A%5CShared%5CEnvironmental%20Risk%5CBIOSAFETY%5CNIH%20Guidelines%20Checklist.docx), [BMBL](file:///P%3A%5CShared%5CEnvironmental%20Risk%5CBIOSAFETY%5CBMBL%20checklist.docx))[ ]  Procedural SOPs |[ ] [ ]   |       |
| 1. **A biohazard door card with current contact information and a full list of the biohazards in use is posted at the entry.**
 |[ ] [ ]   |       |
| 1. **Shipping documents for biohazardous materials are available and up to date.**
 |[ ] [ ] [ ]        |
| **LABORATORY DESIGN AND EQUIPMENT** |
| 1. **The laboratory and equipment are designed to be easily cleaned.**

[ ]  Ceilings, walls, and floors are smooth, sealed, cleanable, and in good condition [ ]  Surfaces are non-porous (no cloth furniture, rugs, drapes, unvarnished wood, unfinished paint)[ ]  Benchtops are impervious to water and resistant to chemicals[ ]  Porous items are not stored on the floor (e.g., cardboard or Styrofoam boxes, wood pallets) |[ ] [ ]   |       |
| 1. **A sink with soap and paper towels is available for hand washing. If not, indicate other means to sanitize hands.**
 |[ ] [ ]   |       |
| 1. **Eyewash station(s) are available and functional, with weekly testing records available.**
 |[ ] [ ]   | Last test date:       |
| 1. **All equipment used with biohazardous materials is marked with a biohazard warning label.**
 |[ ] [ ]   |       |
| 1. **Lab windows either do not open or are fitted with fly screens.**
 |[ ] [ ] [ ]        |
| 1. **The facility door is self-closing, not propped open, and locked when unoccupied.**
 |[ ] [ ]   |       |
| 1. **Splash shields are available for benchtop work.**
 |[ ] [ ] [ ]        |
| 1. **Centrifuges used for biohazardous material have an aerosol-tight removable rotor, are equipped with safety cups, or are inside an aerosol containment device.**
 |[ ] [ ] [ ]        |
| 1. **Aerosol containment (e.g., BSC, gasketed sample containers) is available for aerosol generating equipment (e.g., sonicators, vortexers) used with biohazards.**
 |[ ] [ ] [ ]        |
| 1. **In reviewing your biosafety cabinet(s), verify the following:**

[ ]  BSC was certified within the past year (Certification date:       ).[ ]  BSC is located away from doors, supply air vents, high traffic areas, and other equipment disruptive to air flow.[ ]  Postings on BSC are sanitizable (i.e., papers are in plastic covers).[ ]  Materials, equipment, and samples are not stored on top of or inside the BSC.[ ]  Open flames are not used in the BSC.[ ]  The aspiration flask is inside the BSC and appropriately primed for work. Vacuum lines are protected by in-line filters.  |
| **SHARPS SAFETY** |
| 1. **Sharps have been eliminated or substituted with non-sharps (e.g., plastic for glass) or safer devices (e.g., retractable syringes) whenever possible. Glass Pasteur pipettes are not used.**
 |[ ] [ ]   | Justification:       |
| 1. **A sharps container is available, labeled, and < ¾ full.**
 |[ ] [ ] [ ]        |
| 1. **Sharps and needles are never bent, sheared, broken, recapped, removed from syringes, or otherwise manipulated by hand before disposal.**
 |[ ] [ ]   |       |
| **DISINFECTION AND WASTE DISPOSAL**  |
| 1. **An appropriate decontamination/disinfection method is in use. (Note: 70% ethanol is not appropriate)**
 |[ ] [ ]   | Decontamination method (indicate disinfectant, concentration, and contact time):       |
| 1. **Work surfaces are decontaminated at least daily and after spills.**
 |[ ] [ ]   |       |
| 1. **A spill procedure is developed and posted within the laboratory.**
 |[ ] [ ]   |       |
| 1. **Absorbent material, disinfectant, biohazard waste bags, and a tool for removing broken glass (tweezers, tongs, or broom & dustpan) are available for spill cleanup.**
 |[ ] [ ]   |       |
| 1. **In reviewing your biohazardous waste containers, please verify the following:**

[ ]  **Red** biohazard bag fits securely in a secondary container.[ ]  Secondary container is labeled with biohazard symbol on all lateral sides and the top.[ ]  Radioactive and hazardous chemical waste are not disposed as biohazardous waste.[ ]  Red biohazard bags are not used for ANYTHING other than biohazardous wasteIf not using red bag boxes:[ ]  Secondary container is rigid, leak-resistant, non-porous, and clean. (NO wire containers)[ ]  Secondary container has a lid.[ ]  Items are not stored on top of the secondary container.[ ]  Waste is autoclaved at 123°C for 70 minutes[ ]  PI runs bi-weekly spore testing for autoclave and keeps records for TCEQ (for waste other than plant waste) |
| **PRACTICES** |
| 1. **Biohazardous items are segregated from non-hazardous items.**
 |[ ] [ ]   |       |
| 1. **Eating, drinking, smoking, and applying cosmetics are not permitted in the work area. Food and drink are not stored in the area.**
 |[ ] [ ]   |       |
| 1. **Only plants and/or animals associated with work are present in the lab.**
 |[ ] [ ]   |       |
| 1. **A non-porous, leak-resistant secondary container marked with a biohazard symbol is used to transport material in public areas.**
 |[ ] [ ] [ ]        |
| **PERSONAL PROTECTIVE EQUIPMENT AND LAB ATTIRE** |
| 1. **Personnel are dressed appropriately for lab entry. At minimum, this includes long pants and closed-toe shoes. All skin below the waist is covered.**
 |[ ] [ ]   |       |
| 1. **PPE is provided and appropriate for the risk. At minimum, a lab coat and disposable gloves are required. Disposable gloves are NEVER reused.**
 |[ ] [ ]   |       |
| 1. **Appropriate protective eyewear and/or face shields are available for all personnel. Face shields are required for handling liquid nitrogen.**
 |[ ] [ ]   |       |
| **BSL-2P ADDITIONAL REQUIREMENTS** |
| 1. **There is a record available of all greenhouse experiments in process, including experimental plants, microorganisms, and small animals that are brought into and removed from the facility.**

[ ] Plants/flats are adequately labeled for inspectors to track |[ ] [ ] [ ]        |
| 1. **A greenhouse SOP advising personnel of the potential consequences if practices are not followed and containing a contingency plan for accidental release is available.**
 |[ ] [ ] [ ]        |
| 1. **All organisms are decontaminated and inactivated prior to disposal outside of the greenhouse according to facility SOP.**
 |[ ] [ ] [ ]        |
| 1. **A written program is in place to control unwanted species (seeds, insects, etc.) This is documented in the Lab Safety Binder located in the laboratory space.**
 |[ ] [ ] [ ]        |
| 1. **Flats and other plant containers are in good condition and labeled appropriately.**
 |[ ] [ ] [ ]        |
| **BSL-2+ ADDITIONAL REQUIREMENTS** |
| 1. **Access controls prevent users from entering the BSL2+ work area while experiments are in progress.**
 |[ ] [ ] [ ]        |
| 1. **The lab door opens inward to the BSL2+ area.**
 |[ ] [ ] [ ]        |
| 1. **An autoclave or other means of pretreating waste before disposal is available. Pretreated waste is still disposed of as biohazard waste.**
 |[ ] [ ] [ ]  Autoclave location or alternative method:       |
| 1. **Disposable gowns are available in addition to BSL-2 PPE requirements.**
 |[ ] [ ] [ ]        |
| 1. **Surgical masks and/or respirators are available in addition to BSL-2 PPE requirements.**
 |[ ] [ ] [ ]        |
| 1. **No person under 18 years of age is permitted in the facility.**
 |[ ] [ ] [ ]        |
| 1. **Directional airflow is from areas of lower containment to areas of higher containment (e.g., hallway to lab).**

This can be tested by holding the door between the two spaces open about an inch and holding a thin strip of tissue paper or Kimwipe into the crack. |[ ] [ ] [ ]        |
| **ABSL-2 ADDITIONAL REQUIREMENTS** |
| 1. **The PI/ laboratory supervisor has completed a risk assessment for all work being conducted.**
 |[ ] [ ] [ ]        |
| 1. **Prior to beginning a study animal protocols are reviewed and approved by the Institutional Animal Care and Use Committee (IACUC) and the Institutional Biosafety Committee.**
 |[ ] [ ] [ ]        |
| 1. **A safety manual Specific to the animal facility is prepared or adopted in consultation with the animal facility director and appropriate safety professionals. The safety manual must be available and accessible. Personnel are advised of potential hazards and are required to read and follow instructions on practices and procedures. Manual:**

[ ] describes the biosafety and containment procedures for the experimental animals[ ]  describes the biosafety and containment procedures for the organisms[ ]  describes the biological materials in use, and appropriate agent-specific decontamination methods[ ]  describes the work performed[ ]  contains or references protocols for emergency situations, including exposures, medical emergencies, facility malfunctions[ ]  contains or references protocols for emergency situations, including escape of animals within the animal facility, and other potential emergencies.[ ]  Contains a plan for the disposition of animals during emergency situations.[ ]  contains or references protocols for emergency situations, including escape of animals within the animal facility, and other potential emergencies. |[ ] [ ] [ ]        |
| 1. **The supervisor ensures that animal care, facility, and support personnel receive appropriate training regarding their duties, animal husbandry procedures, potential hazards, manipulations of infectious agents, necessary precautions to minimize exposures, and hazard/exposure evaluation procedures. Personnel receive annual updates and additional training when equipment, procedures, or policies change. Records are maintained for all hazard evaluations, training sessions, and staff attendance.**
 |[ ] [ ] [ ]        |
| 1. **An appropriate medical surveillance program is in place, as determined by risk assessment. The need for an animal allergy prevention program should be considered.**
 |[ ] [ ] [ ]        |
| 1. **Gloves are worn to prevent skin contact with contaminated, infectious and hazardous materials, and when handling animals**
 |[ ] [ ] [ ]        |
| 1. **Use of needles and syringes or other sharp instruments in the animal facility is limited to situations where there is no alternative for such procedures**
 |[ ] [ ] [ ]        |
| 1. **Sink traps are filled with water and/or appropriate liquid to prevent the migration of vermin and gases.**
 |[ ] [ ] [ ]        |
| 1. **Doors to areas where infectious materials and/or animals are housed open inward, are self-closing, and are never propped open.**
 |[ ] [ ] [ ]        |
| 1. **The animal facility is separated from areas that are open to unrestricted personnel traffic within the building. External facility doors are self-closing and self-locking.**
 |[ ] [ ] [ ]        |
| 1. **Access to the animal room is limited. Only those persons required for program or support purposes are authorized to enter the facility. All persons including facility personnel, service workers, and visitors are advised of the potential hazards (natural or research pathogens, allergens, etc.) and are instructed on the appropriate safeguards.**
 |[ ] [ ] [ ]        |
| 1. **If floor drains are provided, the traps are filled with water, and/or appropriate disinfectant to prevent the migration of vermin and gases.**
 |[ ] [ ] [ ]        |
| 1. **Decontamination by an appropriate method is necessary for all potentially infectious materials and animal waste before movement outside the areas where infectious materials and/or animals are housed or are manipulated.**
 |[ ] [ ] [ ]        |
| 1. **Materials to be decontaminated outside of the immediate areas where infectious materials and/or animals are housed or are manipulated must be placed in a durable, leak proof, covered container and secured for transport. The outer surface of the container is disinfected prior to moving materials. The transport container must have a universal biohazard label.**
 |[ ] [ ] [ ]        |
| 1. **Equipment must be decontaminated before repair, maintenance, or removal from the areas where infectious materials and/or animals are housed or are manipulated.**
 |[ ] [ ] [ ]        |
| 1. **Spills involving infectious materials must be contained, decontaminated, and cleaned up by staff properly trained and equipped to work with infectious material.**
 |[ ] [ ] [ ]        |
| 1. **Incidents that may result in exposure to infectious materials must be immediately evaluated and treated according to procedures described in the safety manual. All such incidents must be reported to the animal facility supervisor and RMS/Biosafety.**
 |[ ] [ ] [ ]        |
| 1. **Properly maintained BSCs, personal protective equipment (e.g., gloves, lab coats, face shields, respirators, etc.) and/or other physical containment devices or equipment, are used whenever conducting procedures with a potential for creating aerosols, splashes, or other potential exposures to hazardous materials.**
 |[ ] [ ] [ ]        |
| 1. **A hand-washing sink is located at the exit of the areas where infectious materials and/or animals are housed or are manipulated. Additional sinks for hand washing should be located in other appropriate locations within the facility.**
 |[ ] [ ] [ ]        |
| 1. **Penetrations in floors, walls and ceiling surfaces are sealed, including openings around ducts, doors and doorframes, to facilitate pest control and proper cleaning.**
 |[ ] [ ] [ ]        |
| 1. **The direction of airflow into the animal facility is inward; animal rooms maintain inward directional airflow compared to adjoining hallways. A ducted exhaust air ventilation system is provided. Exhaust air is discharged to the outside without being recirculated to other rooms.**
 |[ ] [ ] [ ]        |

*(Please print form and sign below. A signed copy should be kept in biosafety manual and available during inspection.)*

By signing below, I attest that I have gone through this checklist in my lab and all the answers to the above questions are correct. I understand that meeting these BSL-2 standards is a requirement of my IBC approval. I understand that IBC/EH&S will be randomly verifying the results of this self-assessment.

Signature: Date:

Print Name:       Lab Bldg & Room number:

Responsible PI: